Recent Climate Change Initiatives in Massachusetts and the Northeastern U.S.

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What I will cover today

- The Regional Plan
  - New England Governors and Eastern Canadian Premiers
- Massachusetts Climate Strategy and Plan
  - 4-Pollutant Regulation
  - New Plants have CO2 Offset Requirements
  - Green Electricity Restructuring
    - Renewable Portfolio Standard
    - Renewables Trust Fund ($30m/year)
    - Efficiency Systems Benefit Charge
- What You can do to help

Our Understanding of Climate Change has Progressed

- Stronger indications that a blanket of heat-trapping gases is resulting in glacial melting, forest fires, droughts, avalanches, mudslides, more severe storms and heavy rainfall events, and longer ice-free periods of lakes and waterways.
- Global temperatures are up 0.7 – 1.4 degrees
- New England coastal areas up 1.9 degrees
- The 5 warmest years on record: 1998, 2002, 2003, 2001, and 1997.
- The 10 hottest years ever recorded have all occurred since 1990.

Our Understanding of Climate Change has Progressed, (cont'd)

The World Health Organization reported that extreme weather events due to climate change now cause an estimated 150,000 additional deaths/year directly.

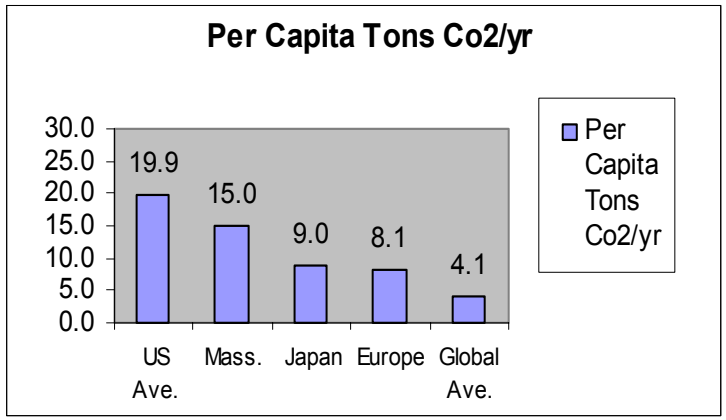
2003 extreme weather events included:

- ***the summer heat waves in which 15,000 French citizens, mostly the elderly, perished***
- ***the drought in the western USA and related wildfires and mudslides***

The residence time of CO_2 is about 100 years and it is additive. Thus, pollution released today continues to warm for about 100 years after it is emitted.

Massachusetts and Regional Emissions in Perspective

- Annual emissions of CO_2=
  - US - 19.9 tons per capita
  - MA - 15.0 tons per capita
  - Europe - 8.1 tons per capita
  - Globally - 4.1 tons per capita



- MA emits 1.9% of the total U.S. inventory including all upstream fuel-cycle emissions with 2.4% of the population.

Reducing State Emissions is Important

- MA state-wide emissions are comparable to the total emissions of whole countries (i.e. Austria, Chile, and Portugal).
- If the New England/ Eastern CA Region was classified as a country, it would be the 12th largest emitter of GHG in the world.
- With NY and NJ = 5th largest.

Choose Actions that are Best for our Economy and Environment

Why is the Climate Plan good for MA?

We can:

- Reduce dependence on foreign oil
- Improve our regional economy
- Improve our environmental health
- Keep energy $$ in the region
- Enhance state and regional strengths
- Reap cost savings through higher efficiency in the generation, transport, and the use of energy
- Recognize good actors and reward action and innovation.

Economic Opportunity

- We have over 100 businesses in state that would benefit from global markets for energy efficiency and better use of materials including:
  - Computer and Systems Equipment makers
  - Transit Equipment Manufacturers
  - Fuel Cell Companies
  - Biofuel product development
  - Material, component and assembly manufacturers
  - System integrators
  - Design and engineering firms
- Strong base of research universities and colleges.

New England Governors/Eastern Canadian Premiers Plan

- Signed August 23, 2001
- Recognizes the problem and sets goals and a strategy to effect change.
- Focus on the regional benefits of action including increased demand for new technologies in a larger market.
- Commit to reductions across the region.
- Each State/Province has their own plan.
- Also programs across the region.

Regional GHG Reduction Goals

- **Short-term Goa**l: Reduce regional GHG emissions to 1990 levels by 2010.
- **Mid-term Goal:** Reduce regional GHG emissions by at least 10% below 1990 levels by 2020.
- **Long-term Goal:** Reduce regional GHG emissions sufficiently to eliminate any dangerous threat to climate; current science suggests this will require reductions of 75%-85% below current levels.

Regional Action Areas

- **The Establishment of a Regional Standardized GHG Emissions Inventory**
- **The Establishment of a Plan for Reducing GHG Emissions and Conserving Energy**
- **Energy goals**:
  - By 2025, reduce the amount of CO_2 emitted per megawatt hour of electricity use by 20% and,
  - Increase the amount of energy saved through conservation programs by 20% by encouraging residential, commercial, industrial and institutional energy conservation.
- **The Promotion of Public Awareness**

Regional Action Areas (cont.)

- **State and Provincial Governments to Lead by Example**
  - Reduce regional emissions of GHGs through improved energy efficiency and lower-carbon fuels within the public sector by 25% by 2012, also saving $34 mill/yr
- **Transportation Sector**
  - Promote the shift to higher efficiency vehicles, lower carbon fuels and advanced technologies through the use of incentives and education
- **Reduce and/or Adapt to the Natural Resource, Economic and Social Impacts of Climate Change**
  - Natural Resource Conference in March in Boston on impacts to regional resources.

Overview of Massachusetts Plan

Like in the regional plan, to reach the goals, there will be a number of areas to work on:

- Lead by Example in State Government
- Public Outreach and Education
- Inventory and Registry
- Energy Use and Supply
- Transportation and Planning
- Partnerships with Business, Institutions, and Municipalities
- Natural Resources: Adaptation and Impacts

Lead by Example

- **State Sustainability Group**
  - Educate employees to look for opportunities for improved energy conservation of all kinds
  - Improve energy efficiency in state facilities
- **Acquire Clean, Fuel-Efficient Vehicles for the State Fleet, (new A&F policy)**
- **Expand State Purchase of Renewable Energy ($17M in long-term contracts)**
- **Greater Recycling and Waste Prevention**
- **Stimulate the Market for Environmentally Preferable Products**

Registry

- Work with the other states to create a framework for future market-oriented and/or regulatory responses to global warming through a regional global warming emission registry.
- Kick-off Meeting with states in Northampton today. States involved include: CA, OR, WA, NC, NY, NJ, RI, CT, ME, VT, NH and WI.
- Looking to create a program harmonized with international standards.
- Common data base and coordinated approaches.

Energy

- Expand renewable energy sources
- Ensure that evolving markets do not discriminate against renewables
- Meet the Renewable Portfolio Standard (RPS) established in Energy Restructuring
  - **The RPS has a long-term goal of 15 percent of the energy supply to be provided by clean, renewable resources by the year 2020.**

Energy (cont.'d)

- Continue work on the Northeast States cap and trade program (Regional Greenhouse Gas Initiative, or RGGI) covering greenhouse gas emissions, initiated by Governor Pataki. The effort is targeting release of a model rule by April, 2005.
- Support the Massachusetts Renewable Energy Trust Fund as it brings new technologies and systems to the market
- Fund innovative projects in Renewables and Climate Change through the new MTC-OCD Partnership

Transportation

Transportation is of the largest sources of CO_2. We propose to:

- Develop mechanisms to promote cleaner and more efficient vehicle choices
- Diesel Clean-up Programs
- Continue to follow **CA Clean Car program** which provides incentives for hybrid and alternatively fueled vehicles

Partners for Change

- Higher Education
  - Establish regional climate network for Colleges and Universities: Regionally, over 65 colleges in NE now on board (15 in MA)
- Cities and Towns
  - Nearly 20 municipalities are involved in MA
- Businesses for Climate Protection
  - New England Council on other business groups are supporting climate action.